LESSON 4.6

NAME _____ DATE _____

Challenge: Skills and Applications

For use with pages 241–247

1. Solve the equation $Ax + By = C$ for y.

2. Based on the result from Exercise 1, what is the slope of the graph of $Ax + By = C$? What is the y-intercept?

Use the result from Exercise 2 to find the slope (m) and the y-intercept (b) of the graph of the equation, without rewriting the equation in slope-intercept form.

3. $5x - 3y = 15$

4. $-2x + 7y = 14$

5. $9x + 6y = -18$

6. $4x + 5y = 7$

7. In order to graph the equation $3x - 4y = 12$ using the intercepts method taught in Lesson 4.3, what two points do you plot?

8. In order to graph the equation $3x - 4y = 12$ using the slope-intercept method, what two points do you plot?

9. Complete the table and look for a pattern to determine when you plot the same two points with the intercepts method and the slope-intercept method.

Equation	*Points plotted*	
	With intercepts method	*With slope-intercept method*
$2x + 5y = 10$		
$4x + 5y = 10$		
$7x + 2y = -14$		
$4x + 6y = -12$		
$-9x + 4y = -36$		

10. What relationship do A, B, and C seem to have in equations $Ax + By = C$ for which you plot the same two points when graphing with the intercepts method or with the slope-intercept method?